

11:06:92A

Meeting with Nilsen at 3 Kings Hotel, Basle. 4th June 1992.

Present:

C. Lister, (SHB)
O. Nilsen, (University of Trondheim).
P. Martin, (PM, S&T)
R. Dempsey, (PM, S&T)

1. Discussions first centred around the press and media coverage that the nicotine in hair project had received after a Press Conference held by the university on opening of a new medical school. A 12th May press conference featured amongst the other activities, 7 scientific presentations on the research which occurs in the new facilities. Initial release of the programme, prior to the actual conference, lead to some enquiries from newspapers directly to ON. These resulted in some pre-presentation publications. Following the actual presentations there were further contacts with ON which lead to publications in three leading Norwegian papers, Radio and television coverage. One of the broadcasts concluded that the extent of exposure to ETS may be miniscule, and much less that one has been lead to believe through the ETS publicity campagne.

Also following this exposure, ON was approached by several research organisations interested in the methodology. Of note was the Norwegian Centre for health and the Norwegian Research Council, the first of which expressed an interest in using ON and his method in a 100,000 children study on Asthma. ON has also written a two page summary of the methodology for publication in the Journal of the Norwegian Epidemiological Society, under request from same. It is yet to be seen if it will be published.

ON felt that the misclassification issue was being clearly picked up by all the journalists.

2. ON felt that the time was right for an ETS Biomonitoring Conference on methodology. He expected to be able to run a dedicated conference, bringing together around 200 delegates involved in the area, in which he hoped to stimulate considerable debate around the biomonitoring of ETS, analysing in detail the pro's and Con's of the old and new methodologies. Possibilities of an alternative format, i.e. workshop was also discussed, as was the opportunity to publish, and hence get the debate into the open, (e.g. Indoor Environment Special issue?). Proposals to be discussed further with CL and ON.
3. PEM mentioned the Nicotine meeting in Salsamaggiore in June. ON is presenting a paper at the IUTOX meeting in Rome, but will not attend Salsamaggiore. He requested that RDE communicated anything of interest after the meeting.

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4. ON said that publications which had been discussed in the previous meeting had not been started yet as they wanted to finish the calibration work with the 1ug/m3 exposure. This was currently being performed, (for approx 5 weeks), and so far they were satisfied that they had maintained a fairly consistent exposure level, (see comments 5. below.)
5. 8 week exposures at 20, 5 and 1 ug/m3. Comparing measured nicotine in the chambers to the calculated concentrations, (i.e. amount volatilised), they determined that some nicotine was being lost before the final collection. There are many plausible mechanisms by which this could occur, but it was felt that they had managed to adjust for these facts and could calculate the corrected nicotine exposure for all groups. For the 20 and 5 ug exposures the difference between the measured and corrected nicotine were as follows:

Target concn.	Mean measured.	Corrected mean.
20ug/m3	20.3460794	23.0682426
5ug/m3	5.13126436	8.23731699

It was noted that the error does not seem to be proportional to the concentration. No explanation available, but results very consistent. (see pages 1-4 of ONs documents)

For the 1ug/m3 ongoing experiments the results of the first few weeks showed a relatively consistent level was maintained, (around 0.7 - 1.2), see p.586 of ONs data.

p788 show the hair nicotine v time of exposure for 20ug/m3 exposure in chambers with hair either lying on grids (L) or hanging (H), this data is only available for two individuals, as there was not enough hair for the others. The data confirms that there is no difference, and therefore the method which is normally used is sufficient. (I cannot recollect whether normal is hanging or lying).

p9,10,11 & 12 show individual data for 4x20ug/m3 exposures, combined data shown on p17. There is a consistent drop in uptake after 8 weeks which may suggest a saturation with time, this possibility was discussed but it was decided that the data was insufficient to be sure, there were possible alternative explanations, and really would require a designed exposure well into the plateau period to be sure. The potential significance of such a threshold was discussed to some extent. Similar results were found for 5ug/m3, (p13,14,15,16 & 18 respectively).

6. ON had taken 19 individual hair samples from the 80 person study previously performed in the chambers. From the original 80 person study it had been possible to divide these into two distinct groups, the high and the low adsorbers. These 19 samples were then suspended in an office, where smoking levels were monitored, at first by calculating the number of cigarettes smoked etc.. and

later by the use of a briefcase sampler. (p19-30 characterise these individual samples and the measurements made in the room. N:B: RDE noted the similarity of the graphs on p28, 829, from which it was discovered that these values were calculated from the pack marked nicotine figures, and the numbers of cigarettes smoked. It was pointed out that pack marked nicotine values were experimentally produced, mainstream values only. RDE promised to provide ON with some data on the contribution of cigarettes to SS / ETS)

Data on p30 show that under these exposure conditions the individuals remained consistently in their respective low or high adsorber groups. Although it should be noted that there is considerable interindividual variation nevertheless. Considerable discussion regarding the variation in baseline levels, and the possible mechanisms and thus meaning of such differences ensued. The general conclusion was that there is much could be learned if we knew more about the mechanisms etc. CI suggested that it would be valuable to talk to a specialist in hair physiology etc...

7. ON concluded by suggesting some possible future directions for this project. These he listed as follows:
Systemic v adsorption studies,
Mechanism of binding - interindividual variation etc.
Long-term, one year exposure over several doses, (to be discussed)
Look for cotinine

ON will draw up some detailed proposals for CI.

8. PEM presented some of the data examination we had done on the 80 individual study to ON. It was strongly felt that there was a large interindividual difference and that the data at 20, 200 and 2000ug/m3 could not give any indication of what was happening at lower doses, it did not appear to be linear. ON was interested in the data and asked RDE to send copies. It was generally accepted that the more recent data, which did go down to the lower doses, was really more relevant.

N.B. ACTION AS HIGHLIGHTED

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